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Measuring the "financing gap" of European corporations

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Measuring the "financing gap" of European corporations.

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Measuring the "Financing Gap" of European Corporations. An Update

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E2 - Consumption, Saving, Production, Employment, and Investment

G3 - Corporate Finance and Governance

Abstract

The "financing gap" measures the need of external funds for the corporate sector as the difference between gross "capital formation" and "savings". Taking advantage of the recent release of data in the ESA95 standard, this paper assembles a set of stylized facts about the corporate financing gap for the main European economies and for the Euro area as a whole. Notably, quarterly data on bank lending to the Euro corporate sector from the European Central Bank enable analysis of the evolution over the current phase of the business cycle. The results update and are consistent with previous findings from data in the ESA79 standard (which cover the period 1970-97 and are discussed in a companion study entitled "The Savings Gap of European Corporations. A first look at the available data"). In particular: (i) a large majority of investment remains funded from internal sources and (ii) bank lending is the principal source of external finance. However, the fact that (iii) loans to corporates tend to overshoot the financing gap during an upturn emerges more clearly in the recent cycle than it did in previous ones.

INTRODUCTION

The "financing" or "savings gap" is generally defined as the difference between the "capital formation" and the "savings" of the corporate sector over a given period and measures the need of external funds. The interpretation of this measure is straightforward; for a given level of capital formation, whatever funds the corporate sector cannot generate from internal sources (retained earnings or cash flow), it has to raise from other sectors. These funds come typically in the form of loans from the banking sector, trade credit from the rest of the world, issues of shares and corporate bonds placed with households, the financial sector and the rest of the world.

The goal of this paper is to provide a basis for further research by establishing a set of stylised facts on the flows of investment and savings of European corporations, as well as key financial sources and uses of funds. The analysis originates and partially relies on a companion paper, entitled "The Savings Gap of European Corporations. A first look at the available data[1]", which is also being presented at this conference. Based on recently released data, published by Eurostat in the ESA 95 standard, covering EU countries, as well as aggregate flow of funds data for the Euro area published from the European Central Bank, we update and confirm the evidence in the companion paper (which was based on analogous data previously compiled by Eurostat following the ESA 79 standard, and covering the period 1970-97). A potential interpretation of the key stylised facts is set forward, which can be summarized along two main lines of reasoning. On the one hand, cyclical analyses detect a marked increase in bank credit as well as share and bond issues at the end of the last decade, in coincidence with a more dynamic investment environment in Europe. On the other hand, long-term analysis of the corporate cash flows, suggests a more prudent assessment. Currently, not unlike the 1970s, the large majority of corporate investment (gross fixed capital formation) is internally financed, with external funds contributing at best for a small fraction of investment. Moreover, traditional bank lending still constitutes the bulk of such external funds. Underlying these competing (but also potentially complementary) economic hypotheses is the deeper question of whether corporate finance is demand driven, in the sense that higher capital formation induces increased offer of financial sources, or instead, supply driven, so that increased availability of credit in general induces companies to invest more.

The first section of the paper quantifies the financing gap and summarizes well-known evidence on the structure of sources and uses of funds by the corporate sector. The second section offers an interpretation of the developments over the business cycle, with special emphasis on the current phase. The final section concludes, by summarizing the key stylised facts supported by data available so far and thus motivating the need for continued improvement of data coverage at a quarterly frequency. Fortunately, such efforts are already under way.

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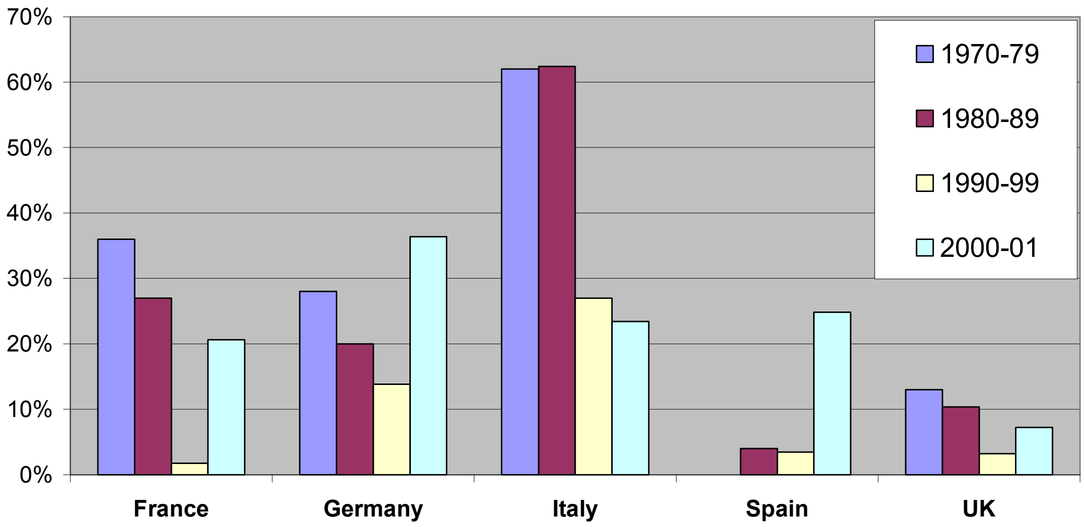
[1] Federico Galizia with Thomas Steinberger. The paper is also available as a European Investment Bank (EIB) Economic and Financial Report (2001/01), on the web at http://www.eib.org/efs/reports.htm. Both studies reflect the author's opinions and not necessarily the EIB's.

A BIRD'S EYE VIEW ON CORPORATE FINANCE IN EUROPE

In the National Accounts by Institutional Sector, the corporate financing gap is found under the name of "net borrowing". The latter takes into account not only the difference between "gross capital formation" and " savings" of "non-financial corporations", but also transfers to this sector. Figure 1 (drawn simply by dividing net borrowing by gross capital formation in each country-year data point and by taking arithmetic averages of the results) is meant to offer an overall view of the financing needs of European corporates in the five largest EU countries over the last three decades. **This figure clearly supports the conclusion that in recent years a large majority of investment is internally financed.** In the following paragraphs, we present a brief historical summary on the evolution of the financing gap, we argue that it is largely financed via bank lending, and conclude by taking a closer look at this form of financing.

Figure 1. Financing Gap by Country and Decade
% of Total Capital Formation



Source: Eurostat ESA 79 and ESA 95 Sector Accounts

A summary of the historical evolution of the financing gap

The companion paper "The savings gap of European Corporates" presents a more detailed historical as well as cyclical perspective of the evolution of the corporate financing gap until the mid-1990s, as it was determined by the specific evolution of savings and investment flows. Here, we limit ourselves to a short summary and an update. Figure 1 shows that at one extreme, companies in the UK have always been and are almost entirely self-financed. At the other extreme Italian companies covered on average close to half of their investments from external sources[2]. French and

[2] Such a notable role of external finance in Italy is partly explained by a system in which a significant fraction of the corporate sector was state owned and financed by state owned banks. Substantial privatisations of banks and corporates in the 1990s thus significantly reduced the financing gap.

German companies represent a middle ground, with financing gaps averaging three quarters of investment, but with important variations over time.

Over time, starting in the 1970s and until the mid-1990s, most countries saw a progressive reduction of investment as a percentage of GPD, while corporate savings remained stable or slightly increasing. Such dynamics de facto implied a disappearing financing gap in France and the UK, while halving it in Italy. In Germany the decline in the gap was limited due to its post-unification investment boom. However, the tendency to lower gaps has been reversed in the second half of the 1990s, due to a generalized investment-led growth. Especially in Germany, France and Spain, the gap was twenty percentage points larger in 2000-01 than during the previous decade. Still, a simple arithmetic average across countries would indicate that over three quarters of corporate investment in Europe are internally financed.

By exclusion, bank lending is the principal external source of corporate funding

For the same set of countries, Figure 2 represents the main financial sources ("incurrence of financial liabilities) and uses ("acquisition of financial assets") of funds starting in the mid-1990s. The figures are in millions of Euros and for ease of reference the financing gap is plot as a line in the sources graph, and similarly, gross capital formation is plotted in the uses graph for each country. Looking at the graphs in the left column, the relation between the financing gap and the incurrence of financial liabilities is remarkably weak, as the latter is several order of magnitudes bigger than the gap. The explanation comes from the set of graphs on the right, showing the acquisition of financial assets is of the same order of magnitude as investment. A closer look at each main category of financial sources and uses is clearly needed in order to understand the economic determinants of such flows.

Share and bond issues still play a minor role in aggregate corporate finance. Throughout the second half of the 1990s and until the recent stock market crash, the corporate sector as a whole has purchased more shares than it has issued. In part, this is explained by the difficulty in consolidating intra-sector transactions, and the ensuing potential double counting of such issues as both sources and uses of funds by the corporate sector[3]. Another explanation comes from important cross-border acquisitions in a number of sectors (notably telecommunications, but also car manufacturers, utilities, energy), which involved both European and US companies. In any case, it is well known that financing via share issues is limited to listed companies – particularly the larger ones – and that such companies represent only a fraction of the overall corporate sector. Figure 2 also shows that issues of bonds were very limited in all countries, including the UK, arguably the most developed corporate bond market in the EU over the period covered.

Another source of funds that is important for a single company, but not on aggregate is *trade credit*. Figure 2 shows that especially in Spain, but also in France and Italy, "other accounts payable" represents a significant fraction of total financial sources. However, "other accounts receivable" represents as significant a fraction of total financial uses, and what is a "payable" for one company is a "receivable" for another, which would disappear with consolidation across the corporate sector at a country level, and even more at a European level.

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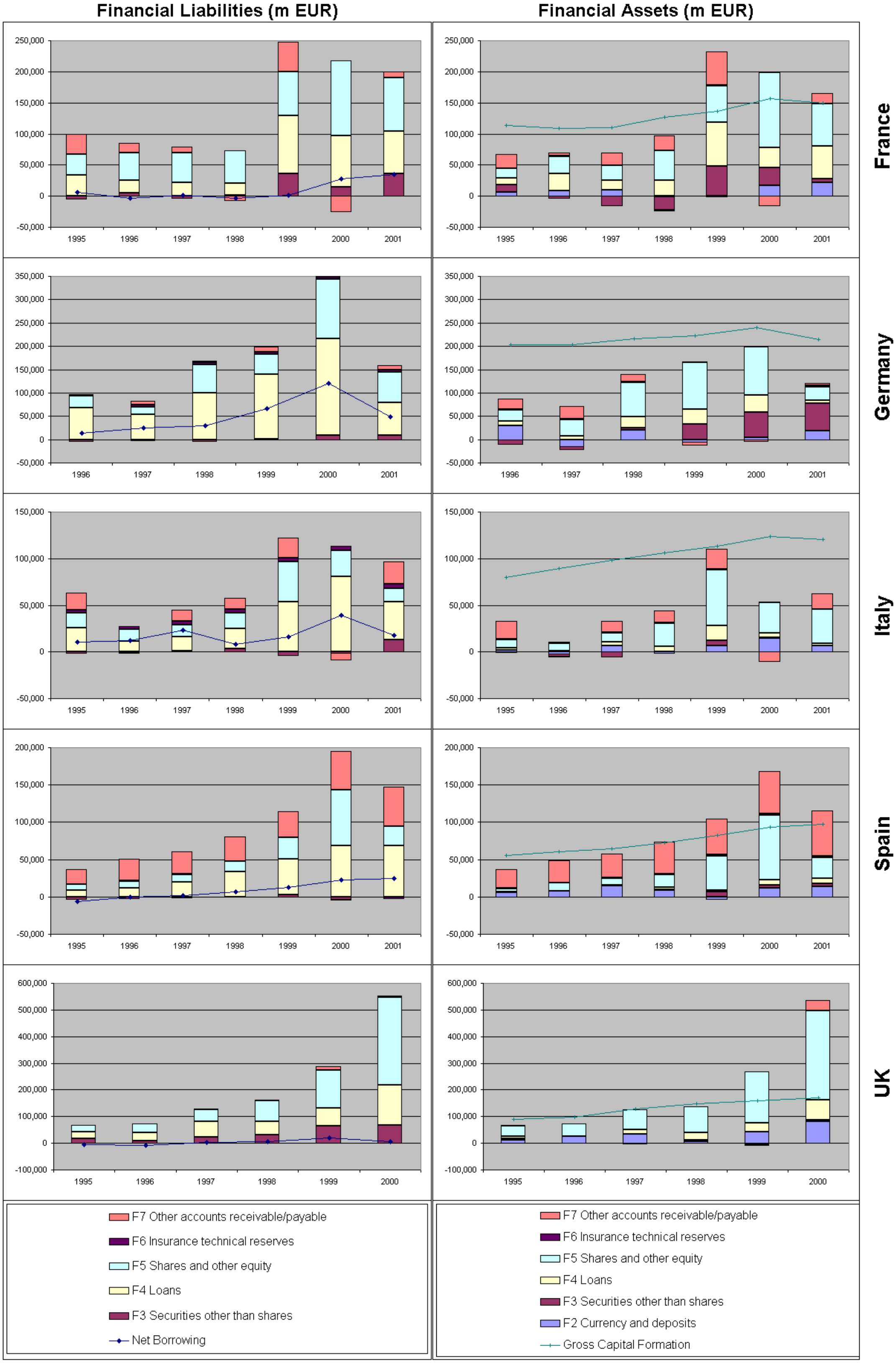
3 As most countries do not publish consolidated data for the corporate sector, for comparability across countries, non-consolidated data are used in Figure 2.

Figure 2. Financial Transactions and Investment of European Non-Financial Corporations

Net Borrowing and Incurrence of Financial Liabilities (m EUR) | **Investment and Acquisition of Financial Assets (m EUR)**



Source: Eurostat Financial and Sector Accounts ESA 95

The only remaining significant source of aggregate funding for the corporate sector is thus *bank credit*, as shown in Figure 2, amounting to one-third to half of total sources across different countries and years.

The role of bank lending is however limited by other factors

The logic outlined above, that, by exclusion, the financing gap of European corporates is filled via bank lending, is weakened by three important considerations. Firstly, at least half of bank lending is for short-term maturities and it is counterbalanced by significant build up of cash ("currency and deposits" in Figure 3). Secondly, corporations are net creditors of households because they extend consumer credit (automobiles manufacturers, retail distributors) and of the public sector (construction companies). Such credits need in turn financing. Thirdly, in some countries corporate pension plans and/or severance grants are administered in such a way to provide a net source of funds to the corporate sector[4]. One is forced to deduce that bank credit – even medium to long-term – ends up financing quite a limited share of corporate investment. This conclusion is also supported by analysis of earlier periods and by company-level data to be found in the companion paper.

INSUFFICIENT SUPPLY OF FUNDS OR SCARCE DEMAND?

The long-term historical perspective should illuminate recent events, particularly the investment and stock market boom at the turn of the millennium and the current crisis. We have already mentioned that corporate investment – as a fraction of GDP – followed a declining trend until the mid-1990s, while corporate restructuring and cost-cutting efforts maintained stable or slightly increasing profits. In some countries, France in particular, the equity base of the corporate sector has been reinforced, in Italy, it has stabilized[5]. Such a tendency was however reversed in the second half of the 1990s and notably at the turn of the millennium, unfortunately with negative consequences on the business cycle.

A strong supply of funds to corporates characterized the "roaring 1990s"

Figure 3 shows that corporate investment as a fraction of GDP increased significantly in all countries from 1993-94 until 2000. In the presence of stable corporate savings, the financing gap progressively widened, and this was reflected in important growth in the sources of funds for the corporate sector, being then bank credit, shares or bond issues.

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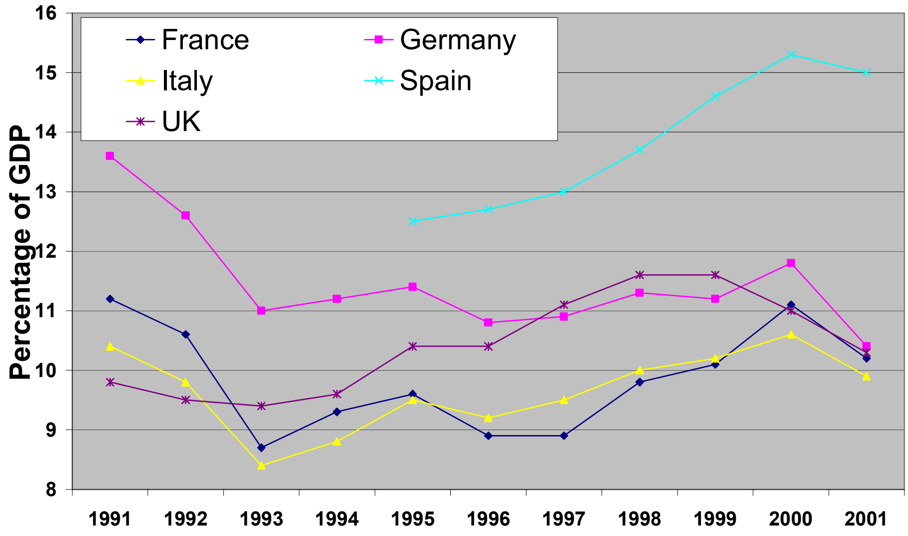
[4] This reasoning could however be turned on its head, and pension plans become a net use of funds by the corporate sector as payment of accrued benefits begins to exceed receipts.

[5] The point is covered in more ample detail in the companion paper "The Savings Gap of European Corporates", also relying on studies by the European Committee of Central Balance Sheet Offices.

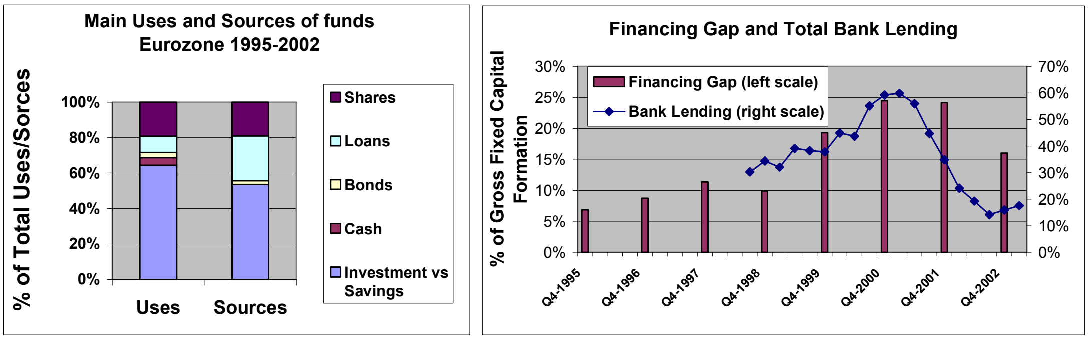
Figure 3. Corporate Gross Capital Formation



However, Figure 2 demonstrates that the absolute amount of sources of funds was a multiple of the financing gap. For instance, in Germany, total financial sources amounted to over EUR 350 bn, compared to a financing gap of EUR 120 bn. Other than for special needs (e.g. payment of UMTS licences) such an abundance of financial sources has been used to invest in financial assets or to fund acquisitions in Europe and beyond. These annual data suggest that, in the presence of a renewed demand of funds for both real and financial investment, banking and financial markets have responded making abundant funds available.

Recently published Euro-wide data from the ECB also support the thesis that availability of financial sources, particularly bank credit, overshot the financing gap in the late 1990s. The left panel in Figure 4 summarizes total sources and uses of funds. Consistently with the analysis in the previous section, issues and purchases of shares balance each other out and the same applies to bonds. Thus loans are left to cover the financing gap, as well as holding of cash and loans to other sectors. The right panel of the figure further demonstrates the point by plotting the annual financing gap for Euro area corporations alongside a moving average of quarterly expansion in bank lending to corporates (at annual rate to ensure comparability). At the business cycle peak in 2000, while the corporate financing gap amounted to 25% of total gross fixed capital formation, bank lending provided finance exceeding twice that amount, at 60%. Quite interestingly the phenomenon reversed over 2001 and 2002, with the financing gap decreasing by a third (from 25% in 2000 to 16% in 2002) against our indicator of lending decreasing by three quarters (from 60% in 2000 to 16% in 2002). Thus, at the end of last year, bank lending appeared to be more or less in line with the financing gap. The point deserves some further elaboration.

Figure 4. Eurozone
Financing Gap, Uses and Source of Funds and Bank Lending



Source: European Central Bank

Are current credit markets are characterized by scarce demand or scarce supply?

There are at least two sets of reasons currently limiting the willingness of European corporates to invest. Firstly, investment is the most volatile component of GDP, often the first to drop at the onset of a recession. Available data confirm that this is indeed happening. Secondly, the ample volume of debt, which was accumulated in the last few years in order to finance both an investment and an acquisition boom, has become particularly difficult to sustain during a bear market, due to reduced value of corporate assets. Based on such considerations, most economists attribute the current slowdown in bank lending to demand factors.

The possibility of a drop in credit supply should also not be overlooked, as the deterioration in both corporate and bank balance sheets may reduce the latter's willingness to lend, and possibly lead to a flight to quality and credit rationing. Since both credit demand and supply depend on cyclical factors and should be expected to co-move we are unable to distinguish between the two competing (but also complementary hypothesis) based on aggregate data. What we find most interesting is the potential to use the quarterly data on corporate loans compiled by the ECB in order to forecast evolutions of the corporate financing gap, which is currently measured solely at annual frequencies.

CONCLUSIONS AND AGENDA FOR FUTURE RESEARCH

In coincidence with the adoption of the Euro and the ever-closer integration of the European economies, important progress has been realised in the collection of flow of funds data. The researcher has now available a much richer and consistent set of information compared to even a couple of years ago. In particular:

- Aggregate sector-level information is assembled in the New Cronos Database, published by Eurostat. The corporate sectors of the largest European countries, notably Germany, France, U.K., Italy and Spain (EU5 henceforth) are covered at **annual frequency**. Annual data on the saving, investment and financing of Euro-area non-financial corporations are published by the ECB. Adoption of the ESA 95 standard has greatly enhanced comparability across countries. Due to issues of comparability between this standard and the former ESA 79[6], this paper only uses ESA 95 data, while a detailed historical analysis using ESA 79 data is found in a companion paper "The savings gap of European Corporations".

- Coverage, at **quarterly frequency**, of amounts outstanding as well as financial transactions in financial assets and liabilities by the corporate sector are published by the National Central Banks at country level and in aggregate for the Euro area by the ECB. In this paper we only look at the latter data.
- For a more disaggregate view of the corporate sector the companion paper relies on two **company-level** sources.
    - Financial reports (including cash-flow statements) for companies that are listed on a European stock market are collected in the Worldscope database from Bureau Van Dijk and Disclosure, again at annual frequencies.
    - Assets and liabilities (but not cash-flows) of both listed and not listed companies are analysed by the European Committee of Central Balance Sheet Data Offices (ECCB) and collected in the BACH and European Sectoral References databases.

While results from such a disparate set of sources are not immediately comparable, they are obviously complementary and do provide consistent information, especially concerning the business cycle dynamics. Accordingly, the nature of this paper, and its companion one, was one of a "first step". Primary concern is about getting stylised facts right, by assembling and comparing evidence from several sources. Since this first step already implies a sizable amount of work we choose to restrict attention to a descriptive analysis and only suggest a preliminary explanation of what is observed. Interpretation will follow as a topic of further research. The key findings are as follows:

1. While notable differences exist among countries and time periods, internal finance is the principal source of funds for the corporate sector in the main European economies, covering in recent periods less than three quarters of investment. The importance of internal finance has been increasing from the 1970s through the mid 1990s, in coincidence with a slowdown in investment and stable to increasing savings. Current levels are close to a long-term average.
2. If one abstracts from privatisation and stock market boom episodes, loans are the principal source of external finance, followed by trade credit. On average half of the loans are short-term and are offset by the presence of cash balances in the sector's accounts. Similarly, accounts payable are largely offset by accounts receivable from households and the public sector. Bond issues are minimal.
3. Analysis of yearly flows shows that the savings gap can vary enormously over the business cycle. Notably, the financing gap attained its lowest level in the mid-1990s in all countries, to rebound strongly towards the long-term average

[6] In Germany, the housing activities of private households are included as part of the corporate sector in the ESA 79 accounts.

of three quarters of investment by the end of the millennium. A reversal followed, chiefly determined by shrinking investment.